

WHAT IS CLAIMED IS:

1. An image forming apparatus adapted to execute a series of image formation processing in such a way as to develop and make visible an electrostatic latent image that is formed on an electrostatic latent image carrier by using a developer layer that is carried on a developer carrier, to transfer the visualized image onto a recording medium, thereafter to eliminate the developer remaining on the electrostatic latent image carrier by using a cleaning unit, and to pass the post-transfer recording medium through fixing means for heating and pressurizing it to thereby perform adhering and fixing of the image, comprising:

predicted image correction means for correcting the developing conditions for visualizing the electrostatic latent image on the electrostatic latent image carrier on the basis of a length of lapse from an immediately preceding image formation processing or that length of time and the environmental conditions.

2. An image forming apparatus adapted to execute a series of image formation processing in such a way as to develop and make visible an electrostatic latent image that is formed on an electrostatic latent image carrier by using a developer layer that is carried on a developer carrier, to transfer the visualized image onto a recording medium, thereafter to eliminate the developer remaining on the electrostatic latent image carrier by using a cleaning unit, and to pass the post-transfer recording medium through fixing means for heating

and pressurizing it to thereby perform adhering and fixing of the image, comprising:

predicted image correction means for correcting the developing conditions for visualizing the electrostatic latent image on the electrostatic latent image carrier on the basis of the length of lapse time that from an immediately preceding image formation processing or that length of time and the environmental conditions; and

control means for controlling the flow of operation associated with the correction of the images,

wherein the control means prohibits, during warming-up of the fixing means, one, or a plurality of, or all, operations of an actual measurement image correction operation that forms a visualized test image on the electrostatic latent image carrier and that, according to that test image, corrects the developing conditions for visualizing the electrostatic latent image formed on the electrostatic latent image carrier, a preliminary rotating operation for the electrostatic latent image carrier, and a preliminary agitating operation for the developer, thereby executing the image formation processing following the completion of warming-up of the fixing means by using a value of correction that is determined by the predicted image correction means.

3. An image forming apparatus adapted to execute a series of image formation processing in such a way as to develop and make visible an electrostatic latent image that is formed on an electrostatic latent image carrier by using a developer layer

that is carried on a developer carrier, to transfer the visualized image onto a recording medium, thereafter to eliminate the developer remaining on the electrostatic latent image carrier by using a cleaning unit, and to pass the 5 post-transfer recording medium through fixing means for heating and pressurizing it to thereby perform adhering and fixing of the image, comprising:

actual measurement image correction means for correcting the developing conditions for visualizing the electrostatic 10 latent image formed on the electrostatic latent image carrier on the basis of a visualized test image formed on the electrostatic latent image carrier;

predicted image correction means for correcting the developing conditions on the basis of the length of lapse time 15 from an immediately preceding image formation processing or that length of time and the environmental conditions; and

control means for controlling the flow of operation associated with the correction of the images,

wherein the control means prohibits, during warming-up 20 of the fixing means, one, or a plurality of, or all, operations of a preliminary rotation operation for the electrostatic latent image carrier, a preliminary agitating operation for the developer, and an image correction operation performed by the actual measurement image correction means, and, when, after 25 completion of warming-up of the fixing means, an allowing-to-stand period of time during which no image formation processing is performed or inputting an operation or inputting

a from-outside printing command is not performed has first continued for a prescribed, or greater than prescribed, length of time, executes the image correction operation, or either one, or both, of the preliminary rotating operation and preliminary agitation operation and executes the image formation processing during the period from completion of warming-up of the fixing means until execution of the image correction operation by using a value of correction that is determined by the predicted image correction means.

10 4. An image forming apparatus according to claim 3, wherein the apparatus executes predicted image correction when input of an operation or a from-outside printing command signal has been accepted.

15 5. An image forming apparatus according to claim 3, wherein in a case where, before the allowing-to-stand length of time has first continued for the prescribed, or greater than prescribed, length of time, image formation processing is executed using the value of correction that is determined by the predicted image correction means, the executing length of 20 time for the preliminary rotating operation and/or preliminary agitating operation following the image correction operation is shortened.

25 6. An image forming apparatus adapted to execute a series of image formation processing in such a way as to develop and make visible an electrostatic latent image that is been formed on an electrostatic latent image carrier by using a developer layer that is carried on a developer carrier, to transfer the

visualized image onto a recording medium, thereafter to
eliminate the developer remaining on the electrostatic latent
image carrier by using a cleaning unit, and to pass the
post-transfer recording medium through fixing means for heating
5 and pressurizing it to thereby perform adhering and fixing of
the image, comprising:

actual measurement image correction means for correcting
the developing conditions for visualizing the electrostatic
latent image formed on the electrostatic latent image carrier
10 on the basis of a visualized test image formed on the
electrostatic latent image carrier;

predicted image correction means for correcting the
developing conditions on the basis of the length of lapse time
from an immediately preceding image formation processing was
15 executed or that length of time and the environmental
conditions; and

control means for controlling the flow of operation
associated with the correction of the images,

wherein the control means prohibits, during warming-up
20 of the fixing means, one, or a plurality of, or all, operations
of a preliminary rotating operation for the electrostatic
latent image carrier, a preliminary agitating operation for the
developer, and an image correction operation performed by the
actual measurement image correction means, and includes a first
25 warming-up mode in which to execute the image formation
processing following the completion of warming-up of the fixing
means by using a value of correction that is determined by the

predicted image correction means and a second warming-up mode in which to execute the image correction operation or the image correction operation followed by either one, or both, of the preliminary rotation operation and the preliminary agitating operation, and selects in which mode the apparatus should be started up according to the time length that has lapsed since an immediately preceding image formation processing was executed as well as the environmental conditions.

7. An image forming apparatus according to claim 2, 10 wherein the power spent for warming up of the fixing means is increased by the extent to which there are prohibited, during warming up the fixing means, one, or a plurality of, or all, operations of the preliminary rotation operation for the electrostatic latent image carrier, the preliminary agitating 15 operation for the developer, and the image correction operation executed by the actual measurement image correction means.

8. An image forming apparatus according to claim 2, wherein the preliminary rotating operation for the electrostatic latent image carrier is executed during warming 20 up of the fixing means.

9. An image forming apparatus according to claim 1, further comprising:

actual measurement image correction means for correcting the developing conditions for visualizing the electrostatic 25 latent image formed on the electrostatic latent image carrier on the basis of a visualized test image formed on the electrostatic latent image carrier;

wherein the predicted image correction means corrects the developing conditions on the basis of the immediately preceding value of correction that was previously determined by the actual measurement image correction means.

- 5 10. An image forming apparatus according to claim 1,
wherein the predicted image correction means adjusts the amount
of correction on the basis of the length of time for which image
formation processing has been executed using the value of
correction previously determined by the predicted image
10 correction means itself.